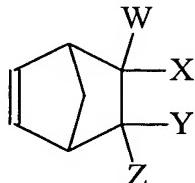


CLAIMS

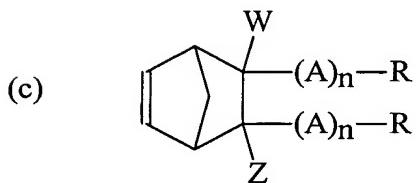
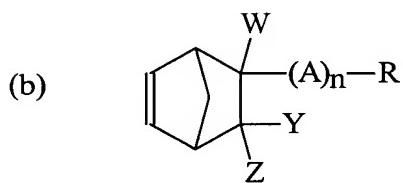
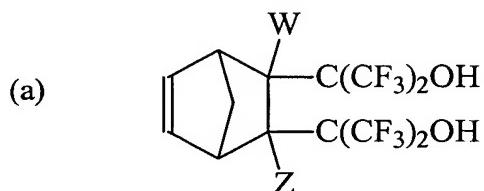
What is claimed is:

1. A compound according to the formula:



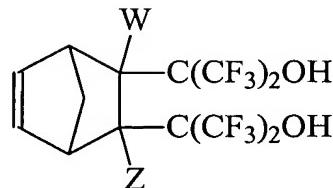
wherein W, X, Y, and Z are independently selected from the group consisting of hydrogen, fluorine, hydroxyl, substituted and unsubstituted alkyl, substituted and unsubstituted fluoroalkyl, provided that: (i) at least one of W, X, Y, and Z is fluorine or a group comprising fluorine, (ii) W, X, Y, and Z are not all the same moiety, (iii) when W and X are both hydrogen, Y and Z are not both hydroxyl, both fluorine, or both alkyl, (iv) when W and Z are both hydrogen or both fluorine, X and Y are not both hydroxyl, (v) when W, X, and Y are all hydrogen, Z is neither alkyl nor hydroxyl, (vi) when X and Y are both H, and W is CH₂OH, Z is not C₃F₇ or CF₃; and (vii) when W is hydrogen and X is hydroxyl, Y and Z are not both fluorine.

2. A compound of claim 1 selected from the group consisting of compounds described by the formulae (a)-(c) below:



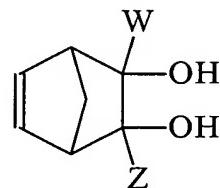
wherein W, X, Y, and Z are independently selected from the group consisting of hydrogen, fluorine, hydroxyl, substituted and unsubstituted alkyl, substituted and unsubstituted fluoroalkyl; each A is independently CH₂ or CF₂; each n is independently from about 0 to about 15; and each R is independently hydrogen, fluorine, trifluoromethyl, hydroxyl, or -C(CF₃)₂OH.

3. The compound of claim 2 wherein said compound is described by the formula:



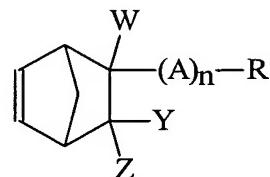
wherein W and Z are independently hydrogen or trifluoromethyl.

- 4, The compound of claim 3 wherein W and Z are the same moiety.
5. The compound of claim 2 wherein said compound is described by the formula:



wherein W and Z are independently substituted or unsubstituted fluoroalkyl.

6. The compound of claim 5 wherein W and Z are the same moiety.
7. The compound of claim 2 wherein said compound is further described by the formula:



wherein:

W, Y, and Z are independently hydrogen, fluorine, trifluoromethyl, or -C(CF₃)₂OH; each A is

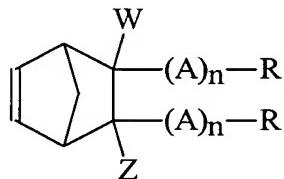
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independently CH₂ or CF₂; each n is independently from about 0 to about 15; and R is hydrogen, fluorine, trifluoromethyl, hydroxyl, or -C(CF₃)₂OH.

8. The compound of claim 7 wherein R is -C(CF₃)₂OH.
9. The compound of claim 8 wherein n=0, and Y and Z are trifluoromethyl.
10. The compound of claim 7 wherein W and Z are the same moiety selected from the group consisting of hydrogen, fluorine, and trifluoromethyl.
11. The compound of claim 7 wherein W, Y, and Z are all the same moiety selected from the group consisting of hydrogen, fluorine, and trifluoromethyl.
12. The compound of claim 2 wherein said compound is further described by the formula:



wherein:

W and Z are independently hydrogen, fluorine, trifluoromethyl, or -C(CF₃)₂OH; each A is independently CH₂ or CF₂; each n is independently from about 1 to about 15; and each R is independently hydrogen, fluorine, trifluoromethyl, hydroxyl, or -C(CF₃)₂OH.

13. The compound of claim 12 wherein W and Z are the same moiety selected from the group consisting of hydrogen, fluorine, and trifluoromethyl.

14. The compound of claim 12 wherein the two -(A)n-R groups are both -(A)n-C(CF₃)₂OH groups.
15. A polymer comprising at least one repeating unit derived from a monomer compound according to claim 1.
16. The polymer according to claim 15, further comprising one or more repeating units derived from a compound selected from the group consisting of bicyclo[2.2.1]hept-5-ene-2-(1,1,1-trifluoro-2-trifluoromethylpropan-2-ol) (NBHFA), CF₂=CF₂, CF₂=CH₂, CF₂=CFCl, CF₂=CHF, CF₃CH=CF₂, CF₃CH=CHF, CF₃CF=CHF, CF₃CF=CH₂, compounds of the formula R_f(CH₂)_nCXf=CXfYf wherein R_f is a perfluoroalkyl group having from about 1 to about 10 carbon atoms, Xf and Yf are independently H or F, provided that when R_f is CF₃ and Xf is F, Yf must be H, and mixtures of two or more thereof.
17. A photoresist composition comprising a polymer according to claim 15.
18. A photoresist composition comprising a polymer according to claim 16.
19. The photoresist composition of claim 18 further comprising a solvent and a photoinitiator.
20. The photoresist composition of claim 19 further comprising a dissolution inhibitor.
21. The photoresist composition of claim 20 further comprising a sensitizer.
22. A method for generating a positive tone resist image on a substrate comprising the steps of coating a substrate with a film comprising a photoresist composition of claim 17, exposing the film to radiation, and developing the image.

23. An integrated circuit assembly comprising a circuit formed by the steps of coating a substrate with a film comprising a photoresist composition of claim 17, exposing the film to radiation, developing the image to expose the substrate, and forming a circuit on the substrate.
24. An optical wave guide comprising a polymer according to claim 15.
25. An anti-reflective coating comprising a polymer according to claim 15.
26. A pellicle comprising a polymer according to claim 15.

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